

# PATENT ABSTRACTS OF JAPAN

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(21)Application number : 2000-106467 (71)Applicant : MATSUSHITA ELECTRIC IND CO LTD  
(22)Date of filing : 07.04.2000 (72)Inventor : KISHIMOTO TAKASHI  
YAMAMOTO TAKEHARU  
WATANABE KATSUYA  
TAKEUCHI TATSUYA

(30)Priority

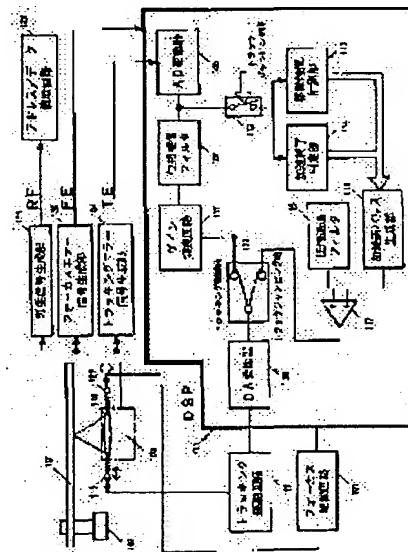
Priority number : 11099663 Priority date : 07.04.1999 Priority country : JP

(54) OPTICAL RECORDING AND REPRODUCING DEVICE

(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide the optical recording and reproducing device with stable performances of track jumping and focus jumping against disturbances caused by vibrations to the device, partial eccentricity, partial face wobbling of an optical disk, etc.

**SOLUTION:** At the time of track jumping, the moving time up to the point of the light beam in jumping is measured. Namely, an acceleration end judging part 114 detects that a tracking error signal has reached a fixed level at the time of acceleration, and a moving time measuring part 113 measures the time from beginning of the acceleration. According to the measured time, an acceleration/deceleration pulse generating part 116 changes the waveform of the deceleration pulse and drives a tracking actuator 119. Or, at the time of deceleration, the tracking actuator 119 is forcibly driven until the tracking error signal is decreased to a prescribed level or lower. Focus jumping is also controlled similarly.



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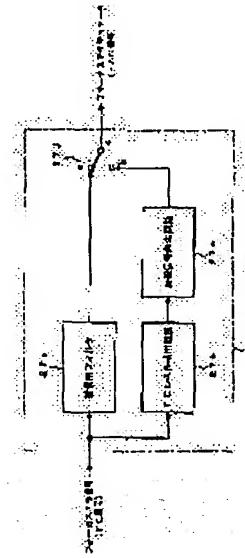
(21)Application number : 11-103303 (71)Applicant : SONY CORP.  
 (22)Date of filing : 09.04.1999 (72)Inventor : SAITO YASUSHI  
 KOMAZAKI TAKAHIRO

## (54) OPTICAL DISK DRIVE APPARATUS AND METHOD FOR FOCUS JUMP THEREOF

## (57)Abstract:

PROBLEM TO BE SOLVED: To output accurate acceleration/deceleration signals by controlling to switch the acceleration signal and deceleration signals outputted from an acceleration/deceleration signal-generating means in accordance with a threshold level of a focus error signal of a level-detecting means.

SOLUTION: An FE signal inputted from an RF amplifier is outputted as a focus actuator drive signal FAD to a biaxial driver via a compensation filter 27a, and a fixed contact (a) and a movable contact element (c) of a switch 27d. The FE signal is also supplied to an FE level detector 27b, where a level of the FE signal is detected. An output of the FE level detector 27b is supplied to an acceleration signal-generating circuit 27c, where an acceleration signal and a deceleration signal for focus jump are generated and outputted as the focus actuator signal FAD to the biaxial driver via a fixed contact (b) and the movable contact element (c) of the switch 27d. When the optical disk is to be reproduced, the movable contact element (c) of the switch 27d is switched to the fixed contact (a), thereby outputting the output of the acceleration signal-generating circuit 27c.



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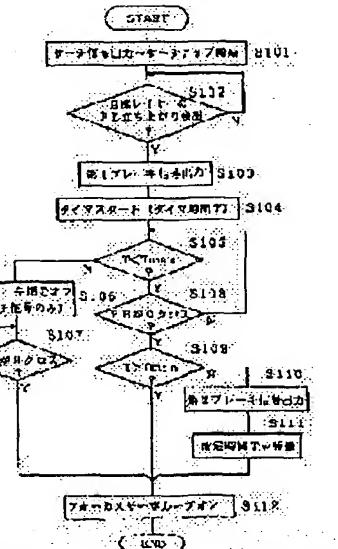
(21)Application number : 10-162291 (71)Applicant : SONY CORP  
 (22)Date of filing : 10.06.1998 (72)Inventor : IIDA MICHIEHIKO

## (54) FOCUS SERVO CONTROLLER

## (57)Abstract:

PROBLEM TO BE SOLVED: To stably obtain an appropriate operation even when an objective lens is moved at a high speed to apply a focus search.

SOLUTION: In this controller, an objective lens is serchup-moved at a high speed by a search signal of a prescribed level and the speed of the lens movement is reduced by applying a braking signal at the rise of an S character curve of a focus error signal. If the detected objective lens speed is within an appropriate range, a servo loop is closed by the zero cross timing of the curve. If the speed exceeds the appropriate range, the servo loop is closed after applying the braking signal having a larger level for a prescribed time when it passes a prescribed time after the zero cross timing of the S character curve. Furthermore, if the speed is slower than the appropriate range, a switching is conducted again from a first braking signal to a search signal and the servo loop is closed at the zero cross timing of the S character curve.



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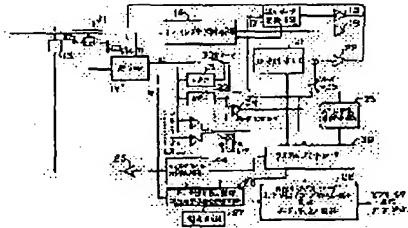
(21)Application number : 09-367520 (71)Applicant : TOSHIBA CORP  
 (22)Date of filing : 29.12.1997 (72)Inventor : HAYASHI YASUHIRO  
 TAMURA MASAYUKI

## (54) FOCUS SERVO CONTROL DEVICE AND DISK REPRODUCING DEVICE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a focus servo control system of a DVD system to achieve stable layer jumping by braking it in advance to an actual focus position, even when a beam spot is largely changed in the speed relative to a disk with much surface wobbling.

**SOLUTION:** At the time of layer jumping, a brake is applied by using a differential signal of a focus error signal, and then, the brake is applied in advance from an actual focus position by switching on the servo at the zero crossing point #. The servo-ON operation is stabilized by sufficiently decreasing the speed. The focus servo control device is provided with a differential means 32 for outputting high frequency elements of the output of a focus error detection means 15, an acceleration means 23 for accelerating the focus lens from the layer presently under reproduction to another layer, an addition means 35 for changing over the differential means 32 to/from the acceleration means 23 according to a result of a comparison means 33 and inputting an output of the differential means 32 to the focus servo.



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